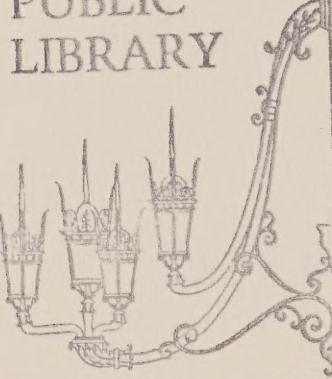


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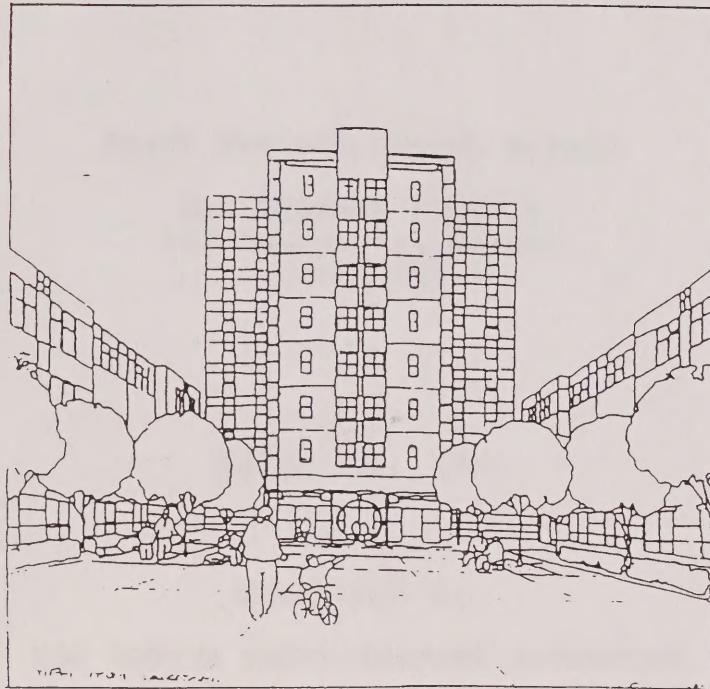
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DRAFT PROJECT IMPACT REPORT



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OAK TERRACE PROJECT

888 Washington Street
Chinatown

AUGUST 26, 1992



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Draft Project Impact Report

**OAK TERRACE PROJECT
888 Washington Street
Chinatown**

August 26, 1992

Submitted to:

THE BOSTON REDEVELOPMENT AUTHORITY

Submitted by:

**OAK TERRACE LIMITED PARTNERSHIP
360-B Tremont Street
Boston, MA 02116
482-2380**

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**I. OAK TERRACE AFFORDABLE HOUSING DEVELOPMENT PROJECT
(SOUTH COVE URBAN RENEWAL PARCEL R3B)
PROJECT DESCRIPTION**

The site of the proposed project is located at the confluence of community housing, services and institutional uses in the Chinatown neighborhood. The parcel area measures approximately 38,411 square feet and currently contains a community garden, a vacant lot, a basketball court and play area, a dilapidated 6-story building and a portion of a surface parking lot.

ACDC proposes to construct Oak Terrace, with 88 rental units on Parcel R3B. Of the 88 units, 68% or 60 units will be affordable to low and moderate income households. ACDC has designed a residential mix responsive to the great demand for affordable family sized units, including 65 two-and three-bedroom units, 9 four bedroom units, and 14 one bedroom units. Overall, 66% of the two bedroom units, 77% of the three bedroom units and 100% of the four bedroom units will be affordable to low and moderate income families. The project also includes 920 SF of community space and 3,489 SF of commercial space. There will be 44 parking spaces, including 5 handicapped spaces, located across from the site on Oak Street on Parcel C.

The urban design features of Oak Terrace affirms Chinatown's cultural identity, reinforces a sense of street-level continuity and establishes Oak Terrace as a critical link within Chinatown and to its neighboring communities. The layout and design of Oak Terrace embody elements of traditional Chinese architecture, such as an interior courtyard surrounded by dwelling units and an Asian influenced landscaping motif.

A central courtyard will be fronted by a 10-story tower on one side and surrounded by three and four storied structures on the other three sides. The residential tower fronting Washington Street will house a majority of one- and two-bedroom flats, and five handicapped units (including 1-1BR, 2-2BR, 1-3BR and 1-4BR). The 2BR and 3BR duplex family units will be housed in the four-story structures with entrances from Oak Street, Pine Street and the central courtyard. The three-story structure along Maple Place will house 4-BR townhouses.

To help alleviate the acute shortage of open space amenities in Chinatown, Oak Street Plaza, a community plaza, will be created. The Plaza, which measures 35'-wide, including a 5'-wide sidewalk, will be designed, constructed and maintained by ACDC. In addition to retaining amenities currently available to Chinatown residents, including a popular vegetable garden - the Oak Street Plaza will also add new amenities for public use and enjoyment with a permanent easement to the Boston Redevelopment Authority. The creation of newly landscaped public open space on Oak Street will greatly improve the pedestrian environment along the Oak

Street edge of Oak Terrace. With a community garden and seating areas, the open space will serve both residents of the development and the neighborhood.

OAK TERRACE AFFORDABLE HOUSING PROJECT SUMMARY

Total Lot Area	30,854 SF
Oak Street Public Plaza	5,485 SF
Maple Place	2,072 SF
Gross Floor Area	109,637 GSF
--Residential	106,148 GSF
--Community	920
--Commercial	3,489 GSF
Floor Area Ratio (Gross Floor Area to Total Lot Area)	3.55
Total Development Cost	\$12,740,000
Ratio of Residential/Total	97%
Dwellings Per Acre	105
Building Foot Print	21,248 SF
Central Courtyard	9,606 SF

UNIT MIX

Size	1-BR	2-BR	3-BR	4-BR	Total
Low Income Assisted Unit	0	11	13	6	30
Low Income Credit Unit	4	12	12	2	30
Market-Rate Unit	10	9	8	1	28
Total Units	14	32	33	9	88
Barrier Free					5

EXHIBIT 1

SITE CONTEXT

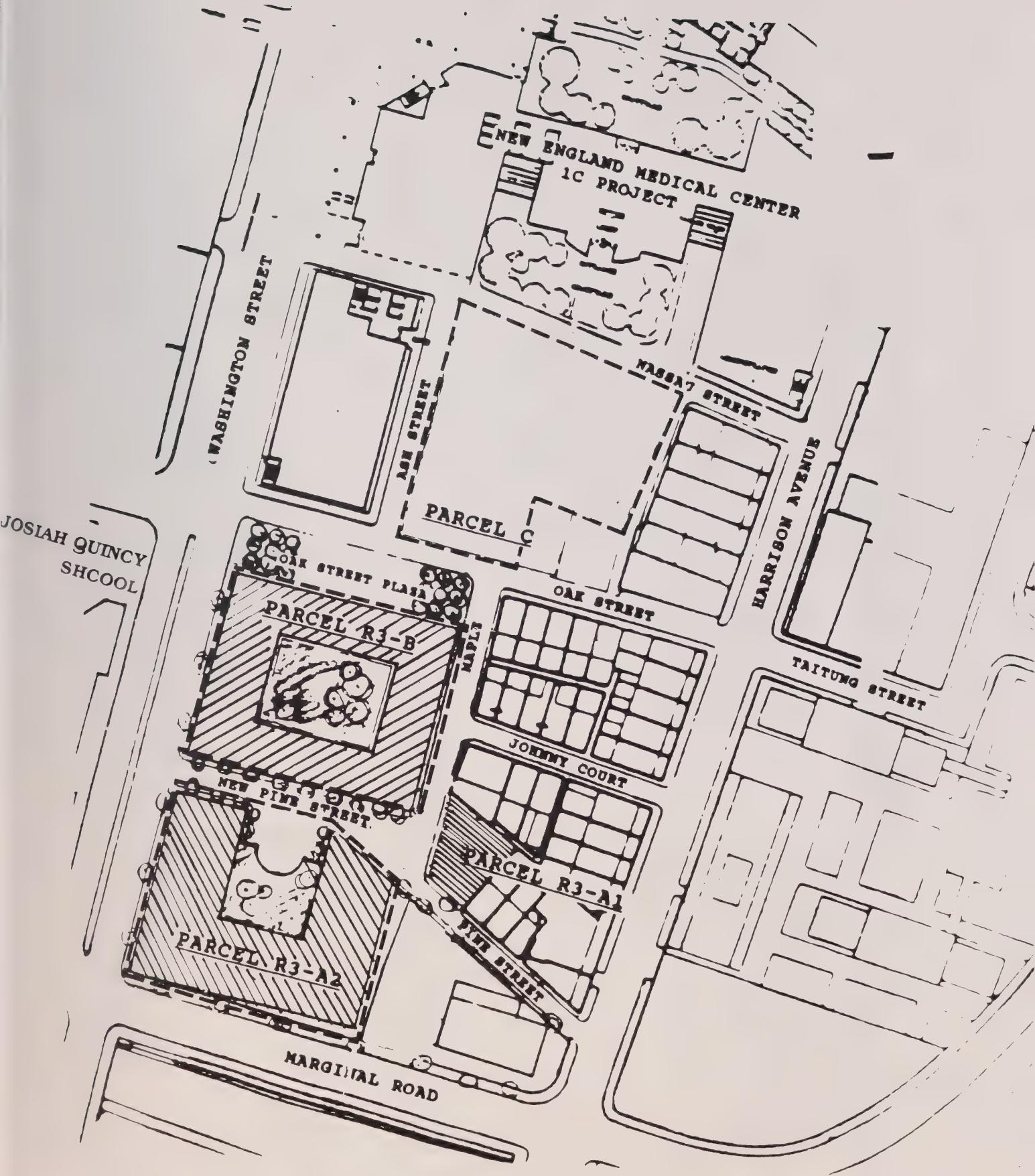


EXHIBIT 2

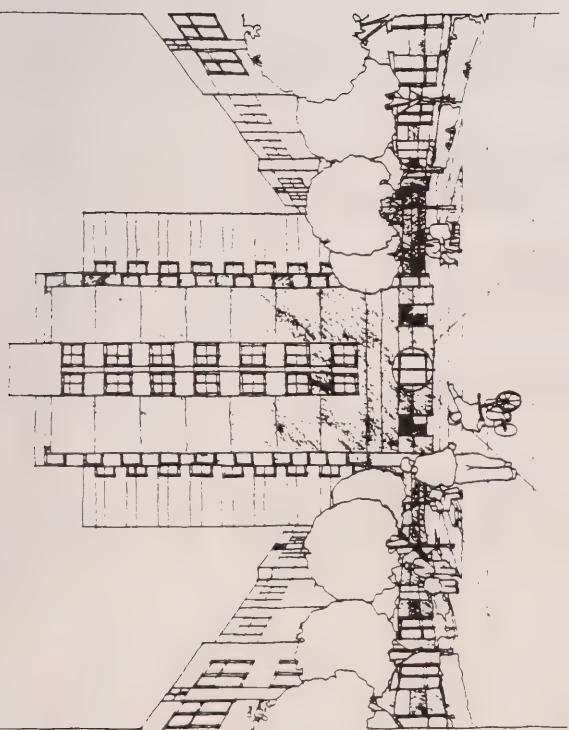
OAK TERRACE PROJECT ON PARCEL R3B

O A K T E R R A C E

信屋
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ASIAN COMMUNITY
DEVELOPMENT CORP.

CANACHE ARCHITECTURE



II. SCOPING DETERMINATION

The following comments are based on Boston Redevelopment Authority review of the Project Notification Form, and does not include the comments of the Inspectional Services Department, which enforces the Code. Therefore, these cannot be relied upon in any application for a building permit or any request for zoning relief.

Pursuant to Article 43, the Proposed Project is located in the Residential Chinatown Subdistrict in the Chinatown District and is, therefore, subject to a maximum building height of eighty (80) feet and a maximum FAR of four (4). If the proposed project has been certified by the Boston Redevelopment Authority to be in compliance with the provisions of Article 31, Development Review Requirements, a maximum building height of one hundred (100) feet and a maximum FAR of six (6) are allowed.

The proposed FAR at 3.55 and the 37' building height of the walk-up duplexes which account for over 75 percent of the building footprint for the residential component are within the standard zoning regulations. The 99' building height of the housing tower does not exceed the enhanced height limit of 100' allowed under Article 43.

In accordance with Article 43 and the Chinatown Community Plan, the proposed project should reflect the land use goals established for the Residential Chinatown Subdistrict which are:

- * To continue to be the primary residential hub for mixed-income families, especially for new immigrants;
- * To encourage the creation of affordable housing and quality open space by increasing building height allowed under zoning;
- * To protect major neighborhood streets, open spaces, and activity modes from excessive shadow and traffic impacts;
- * To connect large scale, high-rise housing with modestly scaled townhouses in an amenable setting; and
- * To provide for the continuing presence of small business, services, and home-based offices to serve residential interests.

The proposed project should further adhere to the general goals and objectives established for Open Space and Urban Design established in the Chinatown Community Plan including the following:

Open Space

- * To increase the accessibility and the quality of open space in the district;
- * To explore and to create alternative forms of open space activity areas;
- * To encourage versatility of design and flexibility in management;
- * To protect and enhance the pedestrian-oriented environment; and
- * To expand and establish an open space network in the neighborhood.

Urban Design

- * To promote a unique neighborhood image that reflects the goals and objectives set forth by the community; and
- * To improve the visibility and orientation between Chinatown, Bay Village, and the South End.

Historic Preservation

- * To encourage architectural designs that reflect the cultural heritage of Chinatown; and
- * To strengthen the unique streetscape and ambience of the neighborhood.

III. GENERAL INFORMATION

A. Development Team

1. Names

- a. The developer of the proposed project is Oak Terrace Limited Partnership. Oak Terrace Corporation is the General Partner of Oak Terrace Limited Partnership. Oak Terrace Limited Partnership has been established by the Asian Community Development Corporation for the purpose of building Oak Terrace.
- b. The attorney for the project is Goodwin, Procter & Hoar.

- c. Project consultants are The Community Builders, Development Consultants; Lawrence K. Cheng Associates, Inc., Architect; Goodwin, Proctor & Hoar, Project Attorneys; William Associates, Architectural; GZA Environmental, Inc., Geotechnical Engineer; and Allen & Major Associates, Civil Engineer.
2. Oak Terrace Limited Partnership
360-B Tremont Street
Boston, MA 02116
Tel: (617) 482-2380
- The Community Builders
95 Berkeley Street
Boston, MA 02116
Tel: (617) 695-9595
- Lawrence K. Cheng Associates, Inc.
107 South Street, Suite 403
Boston, MA 02111
Tel: (617) 728-3113
- Goodwin, Procter & Hoar
Exchange Place
Boston, MA 02109-2881
Tel: (617) 570-1000
- Williams Associates
497 Massachusetts Avenue
Cambridge, MA 02138
Tel: (617) 547-6757
- GZA GeoEnvironmental, Inc.
320 Needham Street
Newton, MA 02164
Tel: (617) 969-0050
- Allen & Major Associates
400 West Cummings Park, Suite 5050
Woburn, MA 01801
Tel: (617) 935-6889
- Howard/Stein-Hudson Associates, Inc.
38 Chauncy Street
Boston, MA 02111
Tel: (617) 482-7080
- * Traffic Consultants paid for by the New England Medical Center for joint traffic study.

3. Oak Terrace Limited Partnership: Carol Lee

Development Consultant: Swan Oey

Architect: Lawrence Cheng

Attorney: Lawrence Cahill

4. The developer has no currently or formerly-owned developments in Boston.

B. Legal Information

1. There is no legal judgement or actions pending concerning the proposed project.

2. There is no history of tax arrears on property owned in Boston by the development team.

3. Evidence of Site Control

a. ACDC has title through several deeds and Certificates of Title as follows:

i. Certificate of Title No. 105700, dated December 20, 1991, filed with Suffolk County Land Registration District;

ii. Order of Taking by Boston Redevelopment Authority, dated December 19, 1991 and recorded with Suffolk County Registry of Deeds on December 20, 1991 at Book 17207, Page 3;

iii. Deed from the Boston Redevelopment Authority to Asian Community Development Corporation, recorded with said Deeds at Book 17207, Page 95 and filed with said Registry District on December 20, 1991 as Document No. 481875; and

iv. Deed from Asian Community Development Corporation to Oak Terrace Limited Partnership (subject to Mortgage and Security Agreement from Asian Community Development Corporation to the Boston Redevelopment Authority recorded with said Deeds at Book 17207, Page 117 and filed with said Registry District as Document No. 481877), recorded with said Registry District on December 20, 1991 at 4:04 p.m. as Document No. 481878.

- b. The site is subject to and has the benefit of the following covenants, restrictions and agreements:
- i. Land Disposition Agreement by and among the Boston Redevelopment Authority, Asian Community Development Corporation and Oak Terrace Limited Partnership, dated December 20, 1991, recorded with said Deeds in Book 17207, Page 95 and filed with the Suffolk County Registry District of the Land Court on December 20, 1991 at 4:04 p.m. as Document No. 481874; and
 - ii. Boston Redevelopment Authority Urban Renewal Plan, South Cove Urban Renewal Area, Project No. Mass. R-92, dated June 8, 1955, recorded in Book 8223, Page 61, and Modifications and Amendments dated December 4, 1975. Proclamation of Minor Modification adopted by the BA in December 19, 1991.

c. Public Easements

The nature and extent of any and all public easements into, through or surrounding the site consist of:

- i. Public easement, rights in and to so much of the premises as lies within the limits of Pine Street and Maple Place to be discontinued before the Public Improvement Commissioner for the City of Boston; and
- ii. License to the public for passage and open space usage over the proposed future Oak Street Plaza across land owned by Oak Terrace Limited Partnership.

C. Financial Information

1. Names and addresses of all financially involved participants:

Oak Terrace Limited Partnership, Developer/Limited Partner
Oak Terrace Corporation, General Partner
Asian Community Development Corporation, sole shareholder of
Oak Terrace Corporation, which is sole General Partner
of Oak Terrace Limited Partnership and also the Limited
Partner.

360-B Tremont Street, Boston, MA 02116

2. See Attached Development Pro forma.

3. See Attached Fifteen Year Operating Pro forma.

D. Project Area

Legal Description of Project Area:

A certain parcel of land situated on the easterly side of Washington Street in the City of Boston, in the County of Suffolk, Commonwealth of Massachusetts, bounded and described as follows:

Beginning at a point in the southeasterly corner of Oak Street and Washington Street at the most northwesterly corner of the granted premises; thence

S 78-57-50 E along the southerly line of Oak Street a distance of one hundred ninety-five and eighty-six hundredths feet (195.86) to a point in the southwesterly corner of Oak Street and Maple Place; thence

S 10-57-28 W along the westerly line of Maple Place a distance of one hundred sixty and forty-five hundredths feet (160.45) to a point in the northerly line of Pine Street; thence

N 52-37-29 W a distance of sixteen and seventy-eight hundredths feet (16.78) to a point; thence

S 15-25-00 W a distance of twelve and eighty-six hundredths feet (12.86) to a point; thence

S 09-00-00 W a distance of thirty-three and forty-seven hundredths feet (33.47) to a point; thence

N 78-43-15 W a distance of one hundred eighty-two and nine hundredths feet (182.09) to a point in the easterly line of Washington Street; the previous four (4) courses being along the northerly line of Pine Street as said street is shown on the below described Delivery Parcel Plan; thence

N 11-16-45 E along the easterly line of Washington Street a distance of one hundred ninety-eight and fifty hundredths feet (198.50) to the point of beginning.

The above described parcel of land contains an area of 38,411 square feet, more or less, and is more particularly shown as Parcel R3B on a plan entitled "Boston Redevelopment Authority South Cove Urban Renewal Area Project No. Mass. R-92 Boston - Suffolk County -Massachusetts DELIVERY PARCEL PLAN PARCELS R3A &

R3B; Scale: 16 feet to an inch, dated November 7, 1991 recorded herewith."

A portion of the above described parcel of land is registered land and is shown as Lot 1 on a subdivision plan No. 4983-C drawn by Charles T. Main, Inc., surveyor for the Land Court, dated April 25, 1968. (Transfer Certificate of Title 77994). Lot 1 on subdivision plan No. 4983-C was formerly shown as Lots A and B on Land Court Plan No. 4983-B.

The foregoing is subject to South Cove Urban Renewal Project No. Mass. R-92, recorded with the Suffolk County Registry of Deeds on September 10, 1968 at Book 8228, Page 61.

E. Employment

The anticipated employment levels include the following:

1. Estimated number of construction jobs: 110
2. Estimated number of permanent jobs: 10

F. Regulatory Controls and Permits

1. Pursuant to Article 43, the Proposed Project is located in the Residential Chinatown Subdistrict in the Chinatown District and is, therefore, subject to a maximum building height of eighty (80) feet and a maximum FAR of four (4). If the proposed project has been certified by the Boston Redevelopment Authority to be in compliance with the provisions of Article 31, Development Review Requirements, a maximum building height of one hundred (100) feet and a maximum FAR of six (6) are allowed.
2. Federal and Local Permits
 - a. Boston Redevelopment Authority: Article 31 Plan Approval
 - b. Boston Civic Design Commission: Design Approval
 - c. Boston Transportation Department: Transportation Access Plan and Agreement
 - d. Boston Water and Sewer Commission: Approval of Sewer Relocation Plan/Sewer Connection Permit
 - e. Boston Department of Public Works: Street Lighting Plan

- f. Boston Fire Department: Plan Review with ISD/Fire Alarm Plan/Truck Access
 - g. Public Improvements Commission(PIC): Pine Street Discontinuance
 - h. Boston Inspectional Service: Building Permit/Occupancy Permit/Electrical/Plumbing/Structural
 - i. Americans with Disabilities Act Architectural Guidelines: Plan Review and Approval
3. An amendment to the South Cove Urban Renewal Plan was enacted on December 19, 1991. There are no other anticipated amendments to the South Cove Urban Renewal Plan.

G. Community Groups

1. Names of abutters and community groups which may be affected by the proposed project:

You Kiong Chin - 2 Johnny Court
Wat Leng Choy - 2 Johnny Court
Jeannett Leung - 2 Johnny Court
Being Kusn Leong - 2 Johnny Court
Chew Wong - 2 Johnny Court
Jane Chin - 3 Johnny Court
Chik Ching Law - 4 Johnny Court
Stephen Chin - 4 Johnny Court
Hung Foon Chin - 4 Johnny Court
Harold Jong - 5 Johnny Court
Alfredo Rodriguez - 5 Johnny Court
Gam Chan - 6 Johnny Court
Paul Chin - 6 Johnny Court
Jie Bin Li - 6 Johnny Court
Xue Lan Tan - 6 Johnny Court
Tran Shi Zhu - 6 Johnny Court
John Chiu Yip Lee- 7 Johnny Court
Ni Kong Tan - 7 Johnny Court
Yee Yen Chia - 7 Johnny Court
On Jew - 8 Johnny Court
Ting Gay Joe - 8 Johnny Court
Wal Hon Tan - 9 Johnny Court
Chat Chun Lau - 9 Johnny Court
Man Yee - 9 Johnny Court
David Moy - 29 Oak Street
Mabel Chin - 31 Oak Street
Joe Baldassini - 31 Oak Street
Seo Chai - 33 Oak Street
Albert Chin - 35 Oak Street
He Ming Wang - 35 Oak Street

He Mint Wong - 35 Oak Street
Lop Ting Mui - 35 Oak Street
Mary Mahanna - 37 Oak Street

Bing Wong
Chinese Economic Development Corporation
31 Beach Street
Boston, MA 02111

Peter Bak Fun Wong
Josiah Quincy Elementary School
885 Washington Street
Boston, MA 02111

David Moy
Quincy School Community Council
885 Washington Street
Boston, MA 02111

Jean Lau Chin
South Cove Community Health Center
885 Washington Street
Boston, MA 02111

Ruth Moy
Golden Age Center
5 Oak Street West
Boston, MA 02111

Stanley Chen
Quincy Towers
5 Oak Street West
Boston, MA 02111

Jerome Grossman
New England Medical Center
750 Washington Street
Boston, MA 02111

Charles A. Schuegz, Principal
Don Bosco Technical High School
300 Tremont Street
Boston, MA 02116

Chinatown Community Center, Inc.
c/o Richard Chin
56 Tyler Street
Boston, MA 02111

2. List of Meetings Proposed

Proposed Meetings with Abutters, Neighborhood and Community Groups

- 7/1/92 Chinese Economic Development Council
(abutter- Mei Wah Village)
location: 31 Beach Street, Chinatown
re: Update on project
- 8/10/92 New England Medical Center
(abutter- I-C Project)
location: 360B Tremont Street
re: Coordination of Construction Schedule
- 9/21/92 Chinatown-South Cove Neighborhood Council,
Abutters and Community Groups
location: CNC Board Meeting
90 Tyler Street
re: Update on Project and Construction
Schedule
- 9/28/92 Abutters
location: Quincy School Community
Council, 885 Washington
Street
re: Discussion on Construction Impacts and
Mitigation Measures
- 11/23/92 Abutters
location: Quincy School Community Council
885 Washington Street
re: Meeting to Report Problems or Mitigation
Improvements
- 12/16/92 Chinese Economic Development Council
location: 31 Beach Street, Chinatown
- 1/93 Abutters
location: Quincy School Community Council
885 Washington Street
re: Meeting to Report Problems or Mitigation
Improvements
- 4/93 Abutters
location: Quincy School Community Council
885 Washington Street
re: Meeting to Report Problems or Mitigation
Improvements

7/93

Abutters

location: Quincy School Community Council
885 Washington Street

re: Meeting to Report Problems or Mitigation
Improvements

3. Meetings held

1/15/92 Ms. Colleen Moynihan-Kilgore, Mass Pike Towers

1/14/92 Mr. Stanley Chen, Quincy Towers

2/3/92 Castle Square Tenant Association

2/6/92 Ms. Nancy Dodson, Tremont Village and Waterford Place

3/16/92 Chinatown-South Cove Neighborhood Council
represented by:

May Chan

Pancho Chang, Boston City Hospital

Edward Chiang (Co-Moderator)

Jean Lau Chin, South Cove Community Health Ctr.

Lucy Chin, c/o Courtney Florist

Dr. Robert Guen, Goon Shea Family Association

Mary Soo Hoo, Chinatown Cafe

George Joe (Director)

Chau Ming Lee, Chinese American Civic Association

L. Ronald Lee

William Moy (Co-Moderator)

Sister Ruth Marie O'Donnell, Maryknoll Sister Ctr.

Father Hugh O'Regan, St. James Church

Henry Szeto, Moon Villa Restaurant

Florence Tow, Chinese Consolidated Benevolent Assn.

David Wong, Sun Sun Company

Frank Wong, China Pearl Restaurant

Peter Bak Fun Wong, Josiah Quincy School

Reginald Wong, Veggie Pub

Davis Woo

Lim Yong, New England Medical Center

Quincy School Community Council

Boston Chinese Evangelical Church

Asian American Resource Workshop

5/7/92 Marie and David Moy, abutters-Oak Street

G. Tax Revenues

Based on MHFA 1989 data on mean tax payments for the City of Boston developments and comparables of two recently completed projects -- Langham Court and Roxbury Corners, we estimate the yearly real estate taxes for Oak Terrace to be \$52,800 or \$600 per unit.

IV. TRANSPORTATION COMPONENT

A. Rental Parking Provisions

The forty-four spaces provided by Oak Terrace for tenant parking is adequate to meet the parking needs at Oak Terrace. Car ownership in Chinatown is not widespread. Only 29 percent of Chinatown residents own/use a car for their transportation needs, according to the 1987 Housing Survey conducted by the Boston Redevelopment Authority.

In addition to a low projected car ownership rate among a significant portion of the tenants, the demand for these for spaces will not exceed the 44 allocated spaces due to Oak Terrace's convenient accessibility to public transportation. The project is located one block from the New England Medical Center T stop, 2 blocks from the Chinatown T stop and 4 blocks from the Boylston T stop. In addition, three buses (MBTA #11, #49 and #3) stop right in front of the development.

Attached is a location map which identifies the parking lot across the street from the development on Oak Street which will be available for tenant parking. The July 24, 1992 Land Disposition Agreement (LDA) amendment between the Boston Redevelopment Authority and the Asian Community Development Corporation guarantees that 44 off-site spaces shall be provided by the BRA for tenant parking.

The rental rates to tenants at the Oak Terrace development will average \$40 monthly for residential tenants. None of the 44 spaces will be qualified for "commercial spaces" as currently defined in the City of Boston Parking Freeze regulations.

B. Transportation Impact

The findings of the near final New England Medical Center/Chinatown Housing Transportation Study conducted by Howard/Stein-Hudson Associates, Inc. for the Asian Community Development Corporation, Chinese Economic Development Council, Inc., New England Medical Center, Inc., and Tufts/New England Medical Center, Inc., hold that the impact of the Proposed Project, with respect to vehicular access and circulation, and proximity to other transportation systems is minimal. The Project's 44 space parking lot will replace an existing NEMC

parking lot with 62 spaces and thus, will reduce or not significantly alter the current use of parking and circulation patterns.

The New England Medical Center/Chinatown Housing Transportation Study was undertaken to describe and analyze the access requirements and impacts of the proposed New England Medical Center (NEMC) Master Plan (July, 1989), two Chinatown housing developments, Oak Terrace and Mei Wah Village, and a Community Recreation Center on Parcel C, for environmental review purposes, as required by the City of Boston.

Under the Transportation Study, the Oak Terrace project is referred to as the housing project to be developed by the Asian Community Development Corporation (ACDC). The Transportation Study began in 1989 and was updated in 1991. Since then, the project has been reduced from 120 to 88 residential units and from 90 to 44 parking spaces off-site. All of the transportation analyses in the Study have been conducted based on the higher than actual number of residential units and parking spaces and therefore, the already minimal transportation impact of the Oak Terrace project is even less.

The purpose of the study is to give an overview of the combined impacts of the NEMC Masterplan Plan developments which can be expected by the design year (2000) and the three community projects so that cumulative impacts and any potential problem areas within a broad study area can be identified.

C. Study Methodology

The study employed accepted traffic and transportation engineering methods for the description and analysis of existing and future access conditions. It considered access of all kinds, via automobile, transit, and walking, assembling data from surveys, inventories and other studies, to determine existing conditions and travel habits. With this as a base, estimates of proposed project travel demand by all modes were made to the future analysis year 2000. Projections were also made of growth in travel demand from other downtown Boston developments to the same future year. This growth in tripmaking was assigned to the transportation system to analyze future conditions. First, analyses are conducted to reflect a condition of growth which would occur by the Year 2000 in the event that the NEMC and Chinatown projects analyzed in this study are not built ("No Build" condition). Then, the volumes generated by the NEMC and three Chinatown projects, are added to the Year 2000 " No-Build" traffic and then analyzed as the "Build" condition.

For automobile access, analyses were applied to 27 Study Area intersections, where Levels of Service (LOS) was calculated for both the AM and PM peak hours. Transit requirements were related

to the various subway and bus lines, while pedestrian conditions were more analyzed more qualitatively with respect to specific pedestrian route conditions.

D. Existing Conditions

Travel surveys and census information show that people in the Study Area depend considerably on transit and walking for access, thereby helping to reduce vehicular congestion which greater auto reliance would cause. The mode choices of employees, visitors and residents are summarized as follows:

Mode	NEMC <u>Employees</u>	NEMC <u>Visitors</u>	Parcel A&B <u>Residents</u>	Parcel C <u>Employees</u>	Parcel C <u>Visitors</u>
	(%)	(%)	(%)	(%)	(%)
Walk	3	11	57	5	40
Transit	44	29	10	65	33
Automobile	53	60	33	30	27

LOS analyses at intersections rate conditions from 'A' to 'F' based on average vehicle, with A representing little or no delay (> 5 sec.) and F more than one minute of average delay. LOS D or better is considered acceptable in urban conditions. Of the 27 intersections analyzed under existing conditions, only 3 operated at worse than LOS D in either peak hour.

The area is served by 2,888 off-street and 456 legal on-street parking spaces. Although some vacancies can usually be found, these facilities experience an average early afternoon usage rate of about 90%.

E. Future Conditions - Year 2000

"No-Build" estimates of future travel growth without the proposed projects were made, based on projections made in the Boston Crossing Environmental Impact Report(EIR), as required. This resulted in an increase of about 23% being added to both the existing AM and PM peak hour vehicular traffic volumes, including allowance for further development of the Tufts University Medical School. A similar increase could be expected for both transit and walk modes.

Intersection LOS analyses for the No-Build condition showed a significant worsening in traffic conditions, with 6 intersections showing a LOS worse than D in either peak hour, 3 more than under existing conditions. A more positive statement is that 21 of the 27 intersections analyzed still would operate at LOS D or better.

F. Project Impacts

Trip generation calculations for the proposed projects resulted in an additional 286 AM peak hour, and 314 PM peak hour vehicular trips being distributed and added to the No-Build volumes to yield the Build conditions. The assignment of these trips recognized the different parking locations within the Study Area. Build LOS analyses resulted in no more intersections showing LOS worse than D, compared with the No-Build situation. A major conclusion here is that the proposed projects' addition of traffic to Study Area streets is minor compared to estimated growth from other sources. This can be graphically seen in the exhibit on the next page which presents total PM peak hour approach volumes at key intersections in the form of a bar chart. Also exhibited is a comparison of LOS analysis results for all three conditions.

All analyses were first performed assuming the existing street and roadway network as a base case. Alternative conditions involving the construction of the new Central Artery and Third Harbor Crossing (CA/T) project and some Turnpike ramp changes were also evaluated, using computer network traffic assignments. The ramp changes involved the proposed elimination of the outbound Arlington Street on-ramp, and the addition of an outbound off-ramp at Berkeley Street and an inbound on-ramp at Tremont Street, Coupled with an extension of Herald Street to Clarendon Street. The Tremont Street ramp with Herald Street extension has been recently eliminated from State and City planning, but the Berkeley Street Ramp is being subjected to an EIR by the Turnpike Authority.

The CA/T project showed a significant overall decrease in Study Area traffic volumes (due to reduced Central Artery bypass traffic on local streets), such that, on the average, volumes were reduced almost to existing levels, with the notable exception of Marginal Road between Hudson Street and Washington Street, due to the connection from Central Artery and new Harbor Tunnel off-ramps directly into Marginal Road. Here, volumes will increase significantly -- from 2,400 vehicles per day to around 18,000 per day. The current CA/T plan will transform this section of Marginal Road from a local street to a major arterial, and bring significant additional traffic past the Parcel A housing site with possible air quality impacts. The ramp connections into Marginal Road are thus vigorously opposed by the Chinatown community. As long as these CA/T off-ramp connections into Marginal Road remain, the addition of new Turnpike ramps has only minor additional effect on intersections being analyzed. Although serving considerable traffic, the ramps seemingly attract new traffic from outside of the Study Area more than causing any significant diversion from local streets. Given the neighborhood opposition to the Marginal Road scheme, alternative ramp arrangements are still under active consideration by the

Massachusetts Department of Public Works, the City of Boston, and the Massachusetts Turnpike Authority. It is important to note, however, that the relatively modest traffic added by the combined NEMC and Chinatown community center and housing developments can be easily accommodated under whatever alternative is selected.

G. Impact/Mitigation Summary

A general overview of the analyses indicates that the proposed projects add only a minor increment of traffic compared to both existing and No-Build traffic levels. The individual component projects represent, of course, smaller increments.

Actual total traffic impacts should be mitigated significantly in most locations by the construction of the CA/T project, but Turnpike ramp change proposals seem to change Study Area conditions only slightly. In this latter regard, the results of the Turnpike Authority EIR should be watched closely for further elaboration on the subject.

Prior to the construction of any of the proposed projects, Project Impact Reports and Access Plans will be required by the City of Boston. In these plans, any changes in parking facility size or locations, building use or size which occur in the design process will be addressed. In addition, specific transportation demand management and systems management measures will be laid out and negotiated.

See Addendum for additional information.

V. ENVIRONMENTAL PROTECTION COMPONENT

A. Shadow

See attached shadow studies. As the shadow studies show, there will be adequate sunlight throughout most of the year. However, since the existing site is vacant except for a six story building, the proposed Oak Terrace development will cast new shadows on the public sidewalks and the internal courtyard. As shown in the shadow studies, the period where the shadow impact will be the most will be during the winter season, when there is little daylight available for the open spaces. With the plaza on Oak Street being on the north side of the development, the shadows cast by the buildings are to be expected. The extent of the shadows, however, is mitigated by the placement of the four story structure along Oak Street. Similarly, the placement of three and four story structures on three sides of the courtyard maximizes the availability of sunlight.

B. Daylight

See the attached BRADA analysis.

C. Air Quality

Air Quality in the project vicinity has been evaluated and conforms with the National Ambient Air Quality Standards of the U.S. Environmental Protection Agency. These findings are reported in the Draft Project Impact Report, Draft Environmental Impact Report for the New England Medical Center's 1-C Project, which is directly across the street from the Oak Terrace Development.

Carbon monoxide is the principle pollutant of concern when considering localized impacts from motor vehicles. Based on the minor changes in projected traffic volumes, it can be concluded that there will be no significant deterioration in carbon monoxide levels resulting from the proposed project.

The operation of the proposed projects ventilation system will not result in any change to the existing ambient air quality levels in the study area.

1. Affected Environment

Air Pollutants:

Six Criteria pollutants (carbon monoxide, nitrogen dioxide, ozone, particulate matter, sulfur dioxide, and lead) are routinely monitored by the Massachusetts Department of Environmental Protection (DEP), Division of Air Quality Control. These pollutants are described below:

- * Carbon Monoxide: Carbon monoxide (CO) is a colorless and odorless gas which is generated in the urban environment by the incomplete combustion of fossil fuels in motor vehicles. Relatively high concentrations of CO are typically found near crowded intersections and along heavily used roadways carrying slow-moving traffic. Very high concentrations of CO in poorly ventilated areas can cause death, while prolonged exposure to substantially lower levels of carbon monoxide can cause headaches, drowsiness, or loss of equilibrium.
- * Nitrogen Oxides: Nitrogen oxides (Nox) constitute a class of compounds that includes nitrogen dioxide (NO₂) and nitric oxide (NO), both of which are emitted by motor vehicles. Although NO₂ and NO can irritate the eyes and nose and impair the respiratory system, Nox is of concern primarily because of its role in the formation of ozone.
- * Ozone: Ozone (O₃), or photochemical oxidants, is a principal cause of lung and eye irritation in an urban environment. It is formed through a series of reactions involving HC and NO₂ which take place in the atmosphere in

the presence of sunlight. Relatively high concentrations of O₃ are normally found only in the summer.

- * Particulate Matter: Particulate matter includes both liquid and solid particles of a wide range of sizes and composition. Of particular health concern are those particles which are smaller than or equal to 10 microns in size - PM10 (one micron equals 0.0000001 meter). The principal health effects of airborne particulate matter are on the respiratory system. Relatively little particulate matter is emitted by motor vehicles.
- * Sulfur Oxides: Sulfur oxides (Sox) constitute a class of compounds of which sulfur dioxide (SO₂) and sulfur trioxide (SO₃) are of greatest importance. Relatively little Sox is emitted from motor vehicles. The health effects of Sox include respiratory illness, damage to the respiratory tract, and bronchioconstriction.
- * Lead: Lead is a stable element which persists and accumulates both in the environment and in animals. Its principal effects in humans are on the blood-forming, nervous, and renal systems. Motor vehicles constitute the major source of lead emissions to the atmosphere. Lead levels in the urban environment are decreasing as a result of its elimination from gasoline.

In order to determine the quality of the air and to assess potential impacts of a project, measured or predicted ambient air quality levels are compared with the National and State Primary and secondary ambient air quality standards (NAAQS) that have been established by the Federal Clean Air Act of 1970 (P.L.91-604, December 21, 1970), and the Clean Air Act amendments of 1977 and 1990 (see Table on next page). The intent of these primary standards is to protect public health, while the intent of the secondary standards is to protect the nation's welfare and account for the effects of air pollutants on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

<u>Pollutant</u>	<u>Average Period</u>	<u>Primary</u>	<u>Secondary</u>
Carbon Monoxide (CO)	8-hour[a]	10,000 (9ppm)	10,000
	1-hour[a]	40,000 (35ppm)	40,000
Sulfur Dioxide (SO ₂)	Annual	80 (0.03ppm)	
	24-hour[a]	365 (0.14ppm)	
	3-hour[a]		1,300 (0.5ppm)
Nitrogen Dioxide (NO ₂)[c]	Annual	100 (0.05ppm)	100
Ozone (O ₃)	1-hour[b]	235 (0.12ppm)	235
PM10	Annual	50	50
	24-hour[b]	150	150
Lead (Pb)	3-month	1.5	1.5

[a] Not to be exceeded more than once per calendar year.

[b] Not to be exceeded more than one day per calendar year.

[c] The Massachusetts Department of Environmental Protection has established a 1-hour guideline level of 320 ug/m³ for NO₂, with a corresponding significant impact level of 32 ug/m³.

Sources: EPA. *National Primary and Secondary Ambient Air Quality Standards.* (40 CFR 50.)

Massachusetts DEP, *Massachusetts Ambient Air Quality Standard (Title 310)*, April 20, 1978.

National And State Ambient Air Quality Standards (micrograms per cubic meter)

2. Existing Air Quality in the Boston Area:

To evaluate the potential air quality impacts of the proposed project, the relevant pollutants are those primarily related to motor vehicle emissions, such as carbon monoxide (CO) and ozone.

Four CO monitoring stations were operated by DEP in Boston in 1990 (Kenmore Square, Visconti Street, 340 Breman Street, and the Federal Post Office Building). No violation of the 1-hour NAAQS of 35 ppm or the 8-hour NAAQS of 9 ppm was reported at any station in 1990. The highest 1-hour and 8-hour concentrations (12.6 ppm and 8.9 ppm, respectively) were reported at 340 Breman Street station.

Two ozone monitoring stations (Chelsea and Sudbury) were also operated by DEP in Boston in 1990. Both stations recorded concentrations in excess of the NAAQS. The Boston area has been classified by EPA as non-attainment for both ozone and carbon monoxide.

D. Solid and Hazardous Wastes

1. Evaluation of Oil and Hazardous Materials Below Grade

An environmental site evaluation was conducted at the proposed project site by GZA. The study included a site reconnaissance, a review of site history, a review of available local, state and federal regulatory records, a limited field exploration program, and chemical screening of water and soil samples from the site.

Local and state records indicated no incidents involving oil or hazardous materials have occurred at the site. A site reconnaissance indicated no surficial evidence of a release of oil or hazardous materials except for small isolated, apparently surficial stains of oil/grease along the southeast portion of the site which are commonly observed on parking lots.

Subsurface conditions within the upper 15 feet of overburden consisted primarily of granular fill materials such as gravel, sand, brick, reinforced concrete, and asphalt. Reinforced concrete was encountered between 8 and 15-feet below grade at boring locations GZB-3 and GZB-5.

The VOCs detected in the soils were generally within the upper 15 feet of overburden and revealed trace to high levels of variously eluting compounds. Trace to low levels of early and late eluting VOC compounds were detected only in GZB-5, and trace levels of BTEX in soils sample GZB-3, S-1, and S-2.

Screening of soil samples indicated the presence of petroleum hydrocarbons (PHCs) ranging between less than 10 ppm and 200 ppm in GZB-2 through GZB-5, and up to 510-1000 ppm at GZB-1, and 1500 ppm in GZB-6. The moderately elevated levels occurred within the upper 12-feet of fill material. PHCs were only observed in the groundwater in GZB-1, and indicated a concentration of 18 ppm. It should be noted that sample GZB-1, S-3, obtained between 10--12 feet below grade, contained a piece of treated wood. It is possible that the treated wood may be an old creosote coated wood pile foundation.

Although the findings of the environmental site evaluation indicated low levels of contamination typical of urban fill, the Department of Environmental Protection (DEP) was notified as required by the Massachusetts Oil Hazardous Material Release Prevention Act, MGL Chapter 21E since the site is within 500 feet of two schools.

An application for a waiver to the DEP was approved on August 3, 1992 in accordance with the Massachusetts Contingency Plan.

2. Solid and Hazardous Waste Management

Solid waste generated during the construction period will be disposed by the general contractor according to state and local regulations. After occupancy, solid waste will be disposed by municipal utilities and trash removal will be contracted to an approved vendor by the management company. A recycling program will be instituted to reduce the volume of projected solid waste.

Any hazardous waste generated by the excavation of the foundation needed for the development of Oak Terrace will be disposed in full accordance with DEP regulations under the Massachusetts Contingency Plan. GZA or another reputable geotechnical environmental engineering firm will be hired to screen soil samples on a regular basis to comply with DEP regulations.

E. Noise

The Oak Terrace Limited Partnership will comply fully with the Design Noise Levels established by the U.S. Department of Housing and Urban Development and the City of Boston Noise Ordinance. Particular attention will be given to traffic noise generated from the Massachusetts Turnpike. Mitigation measures to reduce any excessive noise levels will be executed. The Oak Terrace Limited Partnership will provide central air-conditioning as the main noise mitigation measure. This noise attenuation feature should be a fully adequate measure to address excessive noise levels.

Meeting HUD's environmental standards, criteria and guidelines will assist the proposed project in its goal of creating a suitable living environment at the proposed development. HUD Site Acceptability Standards are as follows:

<u>Noise Zone</u>	<u>Day/Night Sound Level (Ldn)</u>
Acceptable	Not exceeding 65 dB
Normally Unacceptable	Above 65 dB but not exceeding 75 dB
Unacceptable	Above 75 dB

Sites within the normally unacceptable zone require additional sound attenuation: 5 dB if the Ldn is greater than 65 dB but does not exceed 70 dB and 10 dB if the Ldn is greater than 70 dB but does not exceed 75 dB. If the Ldn exceeds 75 dB, the site is considered unacceptable for residential use.

HUD encourages noise attenuation features in new construction or in alterations of existing structures. The HUD mandated or recommended design mitigation features to eliminate or minimize unacceptable or normally unacceptable levels, respectively, including well-sealed double-glazed windows, forced air ventilation systems (permits windows to remain closed in the summer months) and acoustic shielding and insulation.

The Oak Terrace project will also fully comply with the City of Boston Noise Ordinance. The construction and operation of the proposed project would need to comply with Regulation 3 of the City of Boston Noise Ordinance. These City regulations limit the maximum noise levels that will be allowed from construction activity for different classes of property. These levels are to be measured at the lot line of the property. However, measurements are restricted to being taken no closer than 50 feet from any active construction device. For residential land uses, the maximum noise level at the lot line of the affected residential property should not exceed 86dBA. The hours of construction activity are limited to 7AM to 6 PM on weekdays. These regulations are not applicable to impact devices such as pavement breakers, etc. The above regulations fall under the category "exposure criteria". These criteria incorporate the total noise exposure from all equipment operating together. This exposure depends not only on the noise emissions of each piece of equipment, but also on the types of equipment operated together and their numbers, the percentage of time they are being operated, and the distance between the construction activity and sensitive receptors.

Noise from permanent project facilities (e.g., HVAC equipment) must conform to the noise restrictions described in Regulation 2 of the City of Boston Noise Ordinance which prescribes maximum allowable octave band sound pressure levels and A-weighted (dBA) equivalents for various zoning districts categorized as residential, residential-industrial, business, and industrial. The limits are 50 dBA for nighttime (6PM to 7AM) and 60 dBA for daytime (7AM to 6PM) noise levels in residential zones.

One half hour noise levels were measured for two street bounding the Oak Terrace Project. These noise levels are as follows:

<u>Site</u>	<u>Time Period</u>	<u>Noise Level</u>
Oak Street	9:00 - 9:30 am	64.2
Washington Street	11:10 - 11:40; 11:50 - 12:20 pm (average)	63.3

Source: New England Medical Center, Draft Project Impact Report, Draft Environmental Impact Report for NEMC's 1-C Project Phase I, April 1992. Consultants for Noise Survey: Parson's Brinkerhoss.

The Ldn for the site will be determined by HUD after further monitoring of the site area. According to the engineer responsible for the noise study for Oak Terrace at HUD, preliminary findings indicate that the noise mitigation measure of central air-conditioning will be adequate to address noise levels at the site.

There will be minimal noise increases from traffic generated through the 44 parking spaces across the street from the project. With the boiler room located on the roof, and without chiller equipment for central air conditioning, a minimal noise impact is expected for the residences. Further mitigating devices will be used, if necessary, contingent upon HUD-determined Ldn noise levels at the site.

F. Geotechnical Impact

Since the existing site is vacant, there will be no impact on other buildings during construction excavation. Excavation for the foundation will be minimized with the use of a pile foundation for all structures. Temporary shoring of the sidewalk along Washington Street will be provided during the construction of the basement under the highrise tower, and the foundation for the basement is above the existing water table.

G. Construction Impacts

1. Potential Dust and Pollutant Emissions and Mitigation Measures

The primary construction-related air quality impacts will be from fugitive dust emissions generated by truck traffic on unpaved surface, earthworking activities, grading, and demolition. Most fugitive dust is made up of relatively large particles (i.e., particles greater than 100 microns in diameter). Given their relatively large size, these particles tend to settle to the earth within 20 to 30 feet of their source.

In order to minimize these impacts, the contractor will comply with the provisions of Massachusetts General Law (MGL) Chapter III, pertaining to air pollution control. The contractor will be required to keep dust down at all times, including non-working hours, by applying water or a suitable moisture retaining chemical to areas of the construction site, or by treating of materials likely to become airborne and contribute to a condition of air pollution, if left untreated.

Trucks leaving the site and entering paved public streets will be cleaned of mud and dirt clinging to the vehicle body and wheels. Trucks arriving at and leaving the site with materials shall be loaded in a manner that will prevent the dropping of materials or debris on the streets. The contractor shall secure and cover transport equipment and loose materials to ensure that materials do not become airborne during transit.

2. Potential Construction Noise and Mitigation Measures to Minimize Increase in Noise Levels

Construction activities would result in the creation of temporary noise and vibration impacts as a result of on-site construction activity and material handling and truck movements. Actual noise levels will depend on such factors as the location of the work and the choice of equipment used. Noise generated by construction truck traffic will be temporary and variable in nature. To a large extent, this noise will be masked by high ambient noise levels.

The City of Boston noise regulation for construction activity sets the maximum allowable noise levels at the lot line of adjacent properties affected by construction noise. The regulations include a maximum allowable instant noise level and a peak noise level that should not be exceeded ten percent of the time (L10) for various land uses. The maximum L10 noise level of 80 dBA for residential uses will generally apply in and around the project site.

3. Construction Noise Sources

On-site stationary noise sources during construction will include such equipment as backhoes, clamshell bucket excavators, vibratory pile extractors, earth compactors, cranes, tractor-mounted breakers, sheet pile drivers, pumps, generators, compressors, and miscellaneous support equipment. Other significant noise sources will be those associated with construction-generated traffic.

4. Construction Noise Levels

During site clearing and excavation debris and earth will be hauled from the site. Based on the typical construction equipment noise levels, it is expected that noise levels during these activities would be in the 80 dBA to 85 dBA range at a distance of 50 feet from the project site. No noticeable incremental increase in the overall traffic noise levels in the area is expected to result from project-related vehicular or truck traffic.

During foundation work, noise will be created during placement of piles for the foundation. In areas where deep foundations are not required, the deck support structure will require concrete work. Foundation work will generate truck noise from deliveries of concrete and steel. However, these will not greatly influence existing noise levels. If feasible, noise levels associated with deep foundation construction will be mitigated by pre-auguring each pile location for 100 feet and only driving the piles the remaining 10 to 20 feet.

The steel erection is expected to increase noise levels in the surrounding area. A climbing tower crane will be used during steel erection. During this phase, noise levels are expected to be in the range of 75 dBA to 85 dBA at a distance of 50 feet from the construction site boundary. During the exterior shell and finish work, construction noise impacts are expected to be less than during steel erection.

5. Potential Noise Impact Analysis

The existing urban noise levels at the project site would partially mask the noise due to construction. Some of the noise associated with construction results from trucks used both to haul away demolition debris and to bring building materials and construction equipment to the site. Noise from these trucks will tend to be masked by the existing vehicular and truck traffic noise in the area, and should not be noticed as an increase in the overall levels of traffic noise. Noise impacts will be noticeable from actual construction activities on-site.

H. Construction Management

1. Schedule

The construction period of the proposed Oak Terrace Project is expected to last approximately 14 months during the calendar years of 1992 and 1993. Normal construction hours of the project will be from 7:00 AM to 3:30 PM, Monday

through Friday. It is anticipated that some construction activities may require the extension of work hours into the evenings or on Saturdays. All requirements of the City of Boston with regard to notification and noise abatement will be followed.

2. Demolition

The Public Facilities Department (PFD) of the City of Boston will demolish the existing building on the site. PFD will control emissions, remove and dispose of any asbestos, and dispose of demolition waste within all Department of Environmental Protection and City of Boston guidelines.

3. Staging Areas

Staging areas for each phase of the development will be located to ensure safe and efficient construction with a minimum of disruption to the surrounding areas. The staging plan is designed to isolate the construction while providing safe access and egress for pedestrians. A construction staging area will be developed along Pine Street. In addition to Pine Street, Oak Terrace Limited Partnership anticipates the use of Parcel A as part of the staging area. The Chinese Economic Development Council (CEDC) has agreed to such arrangement. The Oak Terrace Limited Partnership is currently discussing this arrangement with the Boston Redevelopment Authority. Some activities such as the installation of support for excavation, delivery of cranes, and other special activities may require temporary use of parts of the public ways. These activities will be closely coordinated with the Boston Transportation Department (BTD) and other public agencies to minimize any potential adverse impacts.

4. Construction Employee Trip Generation and Parking

There will be an estimated 110 FTE constructed jobs generated by the Oak Terrace Project. The number of construction workers located on site will vary, but is estimated that the total number will not exceed 160 workers at anyone time. Vehicular trip generation related to construction activities is a direct function of the number of construction workers. Due to the location of the site and its accessibility to public transportation (MBTA Red, Green, and Orange lines), it is estimated that approximately 50% of all workers will use transit services. (This is compared to approximately 60% to 70% of all work trips into the downtown area utilizing transit). Therefore, approximately 55 to 80 persons will be arriving by automobile. Assuming an auto occupancy of two persons per auto (based on the shortage of parking, current costs of parking, and construction worker

car pooling), the number of new trips generated by the construction workers will range between 28 to 40 two-way trips. Construction workers generally travel before the peak hours (normal work day - 7:00 AM to 3:30 PM) and will not add significantly to peak hour traffic volumes. Therefore, no significant impacts on peak hour traffic operations are anticipated from construction worker vehicle traffic.

Parking for construction workers will be specifically addressed in compliance with the City's Construction Management Program. The Oak Terrace Limited Partnership anticipates that parking will be available at the adjacent site at Parcel A. The Chinese Economic Development Council (CEDC) has agreed to such arrangement. The Oak Terrace Limited Partnership is currently discussing this arrangement with the Boston Redevelopment Authority. The Oak Terrace Limited Partnership will work with the Boston Transportation Department (BTD) to ensure that construction workers will be discouraged from parking on local streets.

5. Truck Volumes

Trucks will be needed to deliver construction material to the site at various times. Truck traffic will vary throughout the construction period, depending on the activity underway at any given time. The maximum number of trucks expected to be entering and exiting the site during construction will be approximately 4 per day. During normal construction activities, the impacts caused by construction trucks during the evening peek hours will be negligible as most deliveries will be completed prior to the PM peak hour. Morning peak hour impacts are also expected to minor due to deliveries being spread uniformly during the work day.

6. Truck Routes

Limiting the impacts of construction traffic and truck noise on the adjacent neighborhoods is the most important factor in determining truck routes. This goal is best achieved by the use of routes that utilize major thoroughfares rather than neighborhood streets. Enforcement of truck routes will be accomplished through clauses in the contractor and subcontractor agreements. Trucks will go directly down the easterly side of Washington Street and stop directly in front of the site or turn onto Pine Street.

Construction traffic from the Turnpike will exit onto the southbound ramp for the Southeast Expressway. The traffic will then exit onto Albany Street, turn right on Herald Street, right on Harrison Street over the Turnpike, left onto Marginal Road, and finally right onto Washington

Street. This same route would be followed by construction traffic heading south on the Southeast Expressway. Construction traffic heading north on the Southeast Expressway will exit onto East Berkeley Street and then turn right onto Washington Street.

All construction traffic leaving the site will exit onto Washington Street and head north to Kneeland Street. This traffic will then turn right onto Kneeland Street, which leads to both the Mass Pike and the Southeast Expressway.

7. Street and Sidewalk Closure and Staging

During construction of the project, portions of sidewalks and streets surrounding the site will need to be closed to pedestrians and automobiles. A detailed construction plan will be included in the project's Traffic Maintenance Plan in compliance with the City's Construction Management Program required by the Boston Transportation Department (BTD) prior to the issuance of a building permit.

The street and sidewalk closures described below are subject to change based on further discussions with the BTD and other appropriate agencies.

a. Sidewalks

The sidewalks along the westerly side of Washington Street will be maintained for pedestrian access during construction at all times. It is anticipated that the easterly side will be closed to pedestrian traffic. Pedestrians can either walk on the westerly sidewalk or under a temporary walkway that will be constructed within the current parking lane on the easterly sidewalk to allow pedestrian passage.

It is anticipated that sidewalks on Pine Street starting from Washington Street will be closed to pedestrian traffic during construction. Two residential buildings at the corner of Pine Street and Harrison Avenue will continue to have pedestrian access at all times from Harrison Avenue.

b. Streets

Pine Street from Washington Street to Harrison Avenue is anticipated to be closed during construction, but will be open to vehicular traffic after completion of the project. The parking lane on the east side of Washington Street will be closed during the first year of construction to allow for deliveries to the site. The relocation of certain utilities within Washington Street and Oak Street will result in temporary lane closings. Utility work will need to be done on Pine Street also. If required to maintain an acceptable

level of access, portions of the utility work could be completed during the evening and the street covered during the day to minimize impacts of traffic access.

8. Construction Noise Mitigation Measures

There are a number of potential measures that will be implemented as appropriate to mitigate the construction noise generated from the proposed project, including:

- * Installing enclosures around the work area where stationary equipment is being used;
- * Replacement of individual operations and techniques by less noisy ones;
- * Selecting the quietest of alternative items of equipment - e.g., electric instead of diesel-powered equipment;
- * Use of silencers for certain types of equipment;
- * Turning off idling equipment; and
- * Keeping noisy equipment as far as possible from sensitive areas.

9. Public Safety

As a public safety provision during the proposed construction of this project, police officer traffic control will be used as necessary. The need for police officers will be determined jointly within the BTD and provided as required. Detail officers will be assigned to the construction zone and will be responsible for maintaining a safe and orderly flow of vehicles and pedestrians if necessary.

Access to the construction areas will be limited by perimeter controls, including temporary construction fencing. Easily understandable, multilingual signage will be provided to ensure safe pedestrian routing around the site.

10. Liaison

Bonnie Wolf, Project Coordinator, will be the liaison between the proposed project, public review agencies, and the surrounding businesses and community.

11. Rodent Control

Oak Terrace Limited Partnership will fulfill the City's established requirements under the Massachusetts State Sanitary Code, Chapter II, 105 CMLR 410.550 and the State Building Code, Section 108.6 for the control of rodent infestation. Procedures will be enforced to fully comply with Policy Number 87-4 which establishes that extermination of rodents shall be required for issuance of permits for demolition, excavation, foundation, and basement rehabilitation.

Oak Terrace Limited Partnership will have an active Pest Control Program throughout the construction phase of our affordable housing development program. The pest control program will be implemented by a fully certified pest control company licensed by the Commonwealth of Massachusetts and in compliance with the City's requirements. The program will provide for extermination treatment to all interior and exterior areas of the Oak Terrace housing development. It includes the monitoring of potential sanitation and structural problems which could be eliminated or controlled to curb pest populations.

A rodent extermination certificate will be filed with the building permit application to the City. Rodent inspection, monitoring and treatment will be implemented before, during and at the completion of all demolition and foundation work for the proposed project. Regularly scheduled site visits throughout the construction phase will be made to ensure an effective rodent control program that will minimize all adverse impacts of the proposed construction project to the surrounding neighborhood.

VI. URBAN DESIGN COMPONENT

The proposed Oak Terrace project (a) is architecturally compatible with surrounding structures; (b) exhibits architectural concepts that enhances the urban design features of the subdistrict in which it is located; (c) augments the quality of the pedestrian environment; and (d) is consistent with the established design guidelines that exist for the area. We submit the following design materials to show that Oak Terrace meets the above criteria. Oak Terrace's design was approved by the Boston Civic Design Commission on July 7, 1992.

A. Major Program Elements

Site: Parcel R3-B, the site of Oak Terrace, is currently a vacant lot with a dilapidated building. The site measures 38,411 square feet, and is bordered by Washington Street, Oak Street, Maple Place and the extension of Pine Street.

Total Lot Area	30,854 SF
Oak Street Public Plaza	5,485 SF
Maple Place	2,072 SF
Gross Floor Area	109,637 SF
--Residential	106,148 SF
--Community	920 SF
--Commercial	3,489 SF

UNIT MIX - Residential

Size	1-BR	2-BR	3-BR	4-BR	
Total					
Low Income Assisted Unit	0	11	13	6	30
Low Income Credit Unit	4	12	12	2	30
Market-Rate Unit	10	9	8	1	28
Total Units	14	32	33	9	88
Barrier Free					5

The urban design features of Oak Terrace affirms Chinatown's cultural identity, reinforces a sense of street-level continuity and enhances Oak Terrace's symbolism as a critical link within Chinatown and to neighboring communities. The layout and design of Oak Terrace embody elements of traditional Chinese architecture with an interior courtyard surrounded by dwelling units and an Asian influenced design motif.

The three and four story residential structures on Oak Street, Maple Place and Pine Street reinforce the existing low-rise residential fabric, and serve to enclose an inner courtyard, entered through a gateway at Oak Street and from Pine Street. This shared open space for passive recreation promotes a sense of community and kinship among neighbors and users of the courtyard. The ten story tower, with its small floor plate responds well to the existing street character of Washington Street and minimizes the impact of shadows cast onto the public spaces.

The quality of the neighborhood will be greatly improved by the development of Oak Terrace. The new residential streetscape will reinforce and affirm the existing community fabric in the area, consisting of a community school, health center, elementary school, and day care center. Furthermore, the creation of a new landscaped public open space on Oak Street will greatly improve the pedestrian environment along the Oak Street edge of Oak

Terrace. With a community garden and seating areas, the open space will serve both residents of the development and the Chinatown neighborhood.

B. See enclosed plans which show relationships of the proposed project to the surrounding areas and districts:

- * massing
- * building height
- * scaling elements
- * public space/open space
- * major topographic features
- * pedestrian and vehicular circulation
- * land use

The associated enclosures will be sent under a separate cover for Sections C through J, excluding I and K.

I. The proposed schedule for the development of the project is as follows:

Construction Period:

November, 1992: Construction Period Begins
December, 1993: Certificate of Occupancy

K. Materials for the submission of design development were provided to the Boston Redevelopment Authority on May 7, 1992 and on June 5, 1992.

VII. HISTORIC RESOURCES COMPONENT

There are no buildings, sites or structures listed in the State Register of Historic Place on Oak Terrace parcel. Therefore, there is no potential adverse effect on any historically-designated structure. The Boston Landmark Commission investigated and deemed the building at 888 Washington Street not of historic value.

VIII. INFRASTRUCTURE SYSTEMS COMPONENT

The anticipated volume of water, sewerage, storm drainage, electricity/energy, telephone, gas steam, cable/computer or other special systems generated by the proposed development will not require upgrading of existing utilities. Connections to existing utilities will be carried out in accordance with all applicable regulations and guidelines. The realignment of Pine Street will be the responsibility of the Department of Public Works.

